



Memorandum

Date: February 12, 2014

To: Joseph Peterson, P.E.
Office Chief, Engineering Services - Hydraulics
Caltrans District 4

CC: Yuanzheng Ge
Senior Transportation Engineer, Engineering Services - Hydraulics
Caltrans District 4

Dina El-Tawansy
Project Manager
Caltrans District 4

From: Analette Ochoa, P.E. and Terence Xiao, P.E. - WRECO

Subject: EA 04-2G7100 US 101 Express Lanes – Location Hydraulic Study Report Summary of Revisions

This memorandum presents a summary of revisions to the Location Hydraulic Study (LHS) Report that was approved on July 25, 2013 for the US 101 Express Lanes Project, EA 04-2G7100. The revisions incorporate changes due to the additional auxiliary lane in the northbound direction between Old Bayshore Road and North 1st Street, from approximately Station 1288+00 to Station 1300+00, which consists of 0.35 acres of additional added impervious area.

The revisions made to the approved LHS Report are discussed in detail in the following sections.

Section 1. General Description

The Project Description used for the approved LHS Report was updated based on the revised project scope, which includes the addition of an auxiliary lane in the northbound direction between Old Bayshore Road and North 1st Street. The following was added at the end of the first paragraph under “Built Alternative” subheading on page 3, after “...where needed.”

Auxiliary lanes are proposed in the following locations:

- Northbound US 101 between Lawrence Expressway and Fair Oaks Avenue
- Northbound US 101 between Great America Parkway and Lawrence Expressway
- Southbound US 101 between Lawrence Expressway and Great America Parkway
- Northbound US 101 between Old Bayshore Road and North 1st Street

Section 2. Hydrologic and Hydraulic Data

There are no changes to this section.



Section 3. Environmental Consequences and Project Impacts

Table 9 of the approved LHS Report summarizes the added impervious areas draining to the base floodplains. The table was revised to include the additional added impervious area draining to the floodplain of Guadalupe River as a result of the additional auxiliary lane along northbound US 101, between Old Bayshore Road and North 1st Street. The table was also revised to show the updated percentage added as a result of the project. The total added impervious area draining to the floodplain is now 4.46 acres, and the percentage added is 0.005% for the floodplain of Guadalupe River. The approved LHS Report already included the total added impervious area and percentage added for the other three auxiliary lane locations; therefore, these numbers were not revised in this memorandum. Table 9 was revised to show as follows (Highlights indicate values that have been modified to reflect the addition of the auxiliary lane):

Table 9. Added Impervious Area Draining to Base Floodplains

Route	Approx. Floodplain Post Mile	Approx. Floodplain Station	Flood Source	Drainage Area (mi ²)	Drainage Area (ac)	Total Added Impervious Area Draining to the Floodplain (ac)	% Added
US 101	16.85	108+00	Madrone Channel	3.1	1,984	7.12	0.359%
US 101	19.21	232+50	Coyote Creek	229	146,560	35.56	0.024%
US 101	19.64	255+00	Coyote Creek				
US 101	23.10	438+00	Coyote Creek				
US 101	23.90	480+00	Coyote Creek				
US 101	25.13	545+00	Coyote Creek				
US 101	25.70	575+00	Coyote Creek				
US 101	26.47	617+00	Coyote Creek				
US 101	28.06	695+00	Coyote Creek				
US 101	29.83	811+50	Coyote Creek				
US 101	30.95	870+50	Upper Silver Creek	5.5	3,520	0.24	0.007%
US 101	31.15	881+00	Upper Silver Creek	43.5	27,840	1.92	0.007%
US 101	35.96	1135+00	Lower Silver Creek				
US 101	36.37	1155+00	Lower Silver Creek	-	-	-	-
US 101	36.48	1161+00	N/A				
US 101	36.69	1173+00	Coyote Creek	291	186,240	38.23	0.021%
US 101	38.24	1255+00	N/A	-	-	-	-
US 101	39.34	1313+00	N/A	-	-	-	-
US 101	39.85	1340+00	N/A	-	-	-	-
US 101	40.19	1357+50	Guadalupe River	153	97,920	4.46	0.005%
US 101	40.62	1380+00	N/A	-	-	-	-
US 101	41.05	1403+00	N/A	-	-	-	-
US 101	41.75	1440+00	N/A	-	-	-	-
US 101	42.45	1465+60	San Tomas Aquino Creek	41.8	26,752	2.17	0.008%
US 101	43.32	1522+00	Calabazas Creek	19.1	12,224	3.38	0.028%
US 101	44.69	1594+10	Sunnyvale East Channel	6.1	3,904	1.54	0.039%
US 101	48.04	1771+30	Stevens Creek	36.4	23,296	0.03	0.000%
US 101	49.19	1832+00	Permanente Creek	15.8	10,112	-	-
US 101	50.66	1909+70	Adobe Creek	13.5	8,640	-	-
US 101	51.37	1947+50	Matadero Creek	13.6	8,704	-	-

Notes: "-" indicates that information is not available or not applicable

Source: FEMA, URS



Section 4. References

There are no changes to this section.

Appendix A, Appendix B, and Appendix C

There are no changes to these appendices.

Appendix D – Pavement Delineation Plan

Sheets PD-100, PD-101, and PD-102 in Appendix D in the approved LHS Report were replaced with the revised sheets showing the additional auxiliary lane along northbound US 101 between Old Bayshore Road and North 1st Street. The revised sheets are attached to this memorandum (see Attachment 1).

Conclusion

According to the Flood Insurance Rate Map (FIRM) 06085C0231H, the auxiliary lane along northbound US 101 between Old Bayshore Road and North 1st Street is not within any base floodplain. The added impervious area as a result of adding this auxiliary lane is insignificant compared to the overall drainage area of the Guadalupe River watershed upstream from the US 101 river crossing. The increase in peak flow from the additional pavement will not significantly increase the water surface elevation of the base floodplain. Therefore, there will be minimal impacts to the base floodplain as a result of adding this auxiliary lane, and mitigation will not be required.



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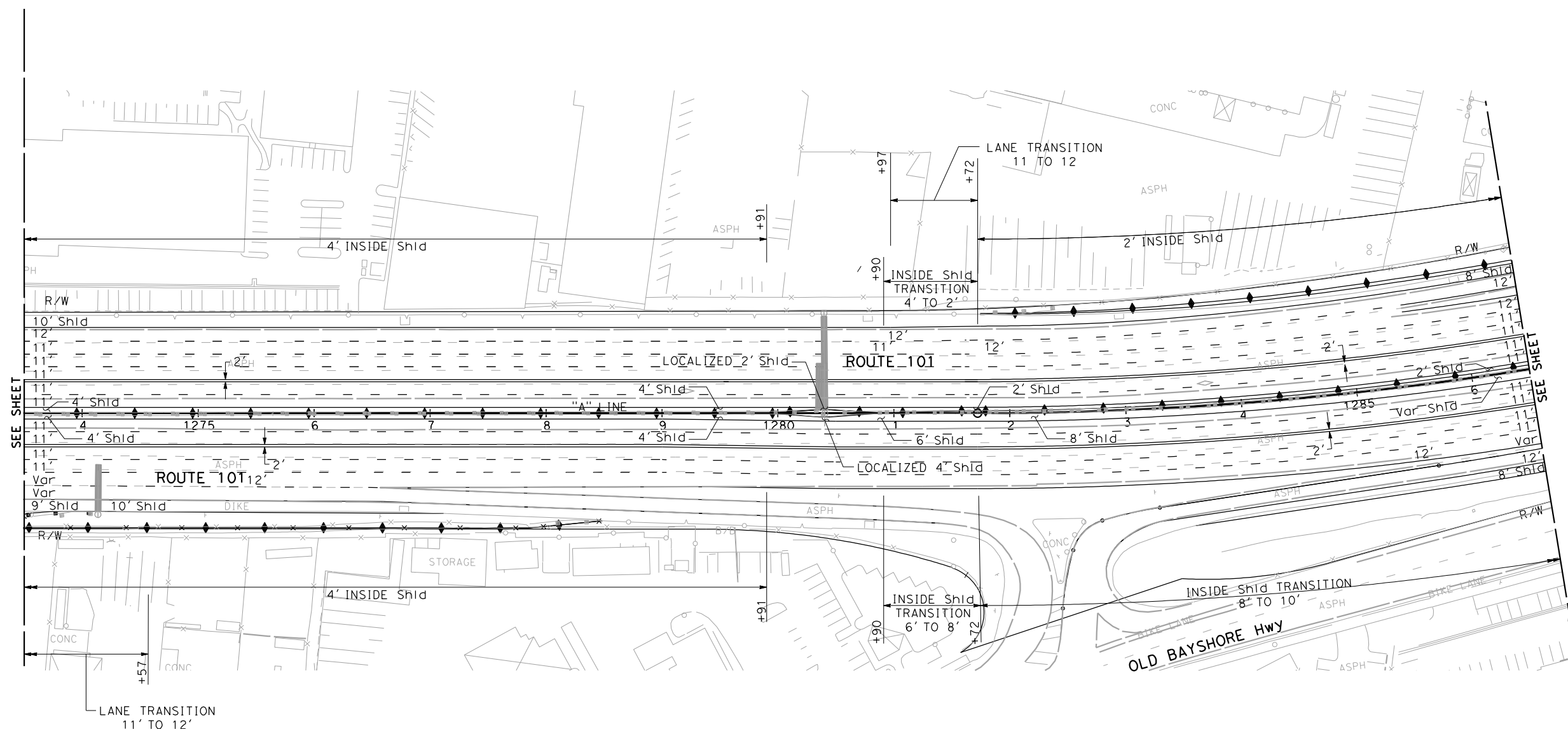
Attachment 1: Sheets PD-100, PD-101, and PD-102



FOR ACCURATE RIGHT OF WAY DATA, CONTACT
RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

S A N J O S E

N 4th St



FOR NOTES AND LEGEND
SEE SHEET PD-1

SCALE: 1" = 50'

PD-100

APPROVED FOR PAVEMENT DELINEATION WORK ONLY

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
4	SCI	101 85	16.00/52.55 23.0/24.1		

REGISTERED CIVIL ENGINEER	DATE
PLANS APPROVAL DATE	

*THE STATE OF CALIFORNIA OR ITS OFFICERS
OR AGENTS SHALL NOT BE RESPONSIBLE FOR
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URS Corporation 100 W San Fernando St Suite 200 San Jose, CA 95113	Santa Clara Valley Transportation Authority 3331 N First Street San Jose, CA 95134
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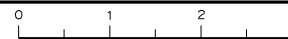
BORDER LAST REVISED 7/2/2010

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RELATIVE BORDER SCALE
IS IN INCHES



UNIT XXXX

PROJECT NUMBER & PHASE

04000026710

DATE PLOTTED => 1/29/2014	LAST REVISION
TIME PLOTTED => 9:22:03 AM	11-14-12

NOTE:
FOR ACCURATE RIGHT OF WAY DATA, CONTACT
RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

SAN JOSE

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
4	SCI	101 85	16.00/52.55 23.0/24.1		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

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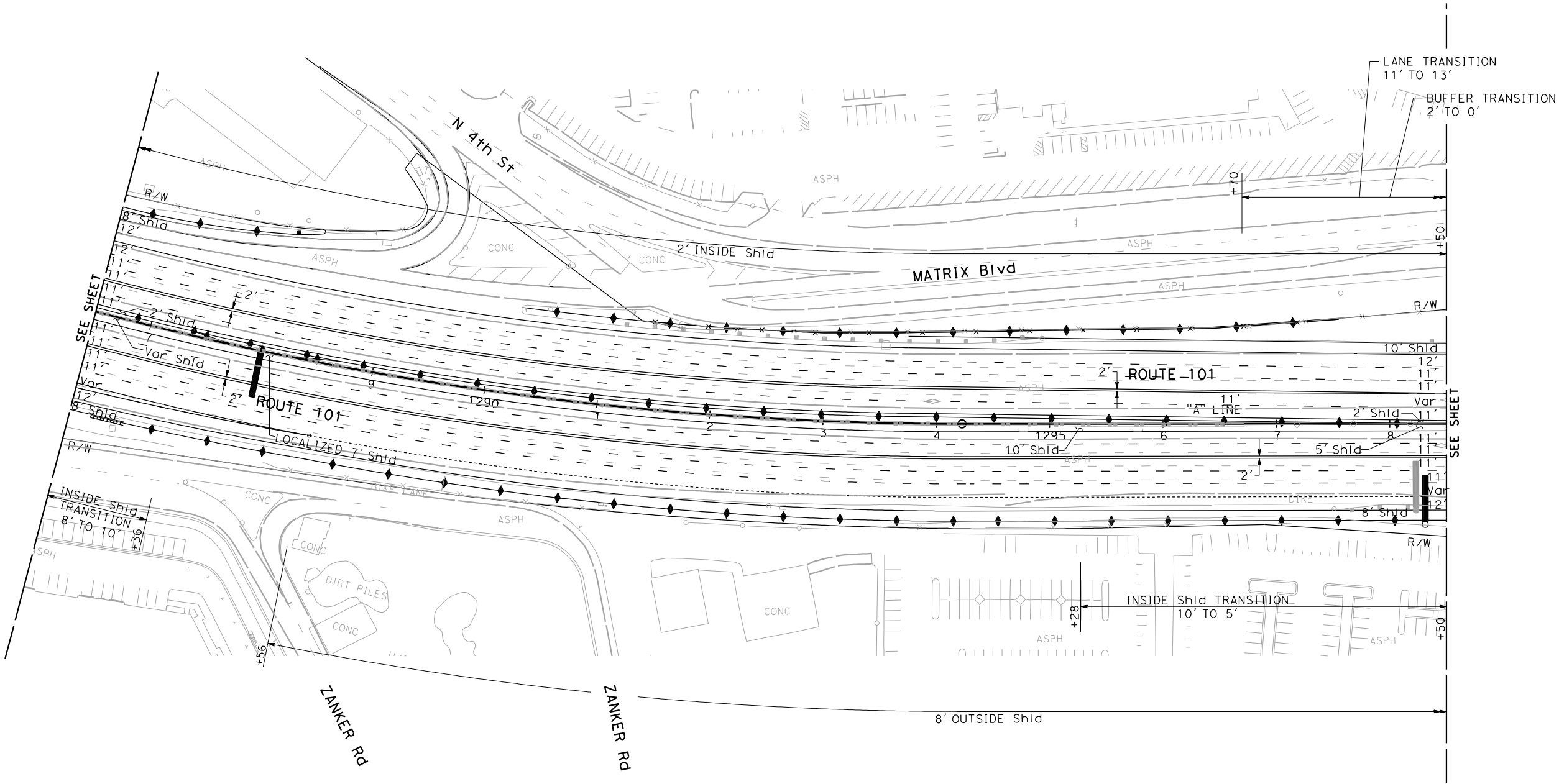
REGISTERED PROFESSIONAL ENGINEER

No.

Exp.

CIVIL

STATE OF CALIFORNIA



FOR NOTES AND LEGEND
SEE SHEET PD-1

PAVEMENT DELINEATION PLAN
SCALE: 1" = 50'
PD-101

APPROVED FOR PAVEMENT DELINEATION WORK ONLY

